Fact Sheet
March 25, 2014

To be constructed:
Town of Whitestown South Wastewater Treatment Plant
to be located at 7728 South County Road 450 East
Brownsburg, Indiana, Boone County

Outfall Location	Latitude:	39° 55' 24" N
	Longitude:	86° 23' 26" W

NPDES Permit No. IN0064211

Background

This is the proposed new NPDES permit for the Town of Whitestown South Wastewater Treatment Plant. The permittee submitted an application for a new NPDES permit which was received on December 23, 2013. The permittee proposes to operate a Class III, 1.7 MGD extended aeration treatment facility to consist of an influent flow meter, a mechanical fine screen and grit removal, sequencing batch reactors, ultra violet light disinfection, an effluent flow meter, and cascade post aeration. Sludge will be treated by aerobic digestion and aerated sludge holding, followed by mechanical dewatering by a centrifuge. Final sludge will be disposed by landfill.

The Town of Whitestown currently operates the Town of Whitestown Wastewater Treatment Plant under NPDES permit IN0020796 located at 203 Peters Street, Whitestown, Indiana, Boone County. The proposed South facility would replace this existing facility.

The proposed facility is to be located in Boone County, and the proposed outfall to White Lick Creek will be located in Hendricks County.

Collection System

The collection system is comprised of 100% separate sanitary sewers by design with no overflow or bypass points.

Spill Reporting Requirements

Reporting requirements associated with the Spill Reporting, Containment, and Response requirements of 327 IAC 2-6.1 are included in Part II.B.2.c. and Part II.C.3. of the NPDES permit. Spills from the permitted facility meeting the definition of a spill under 327 IAC 2-6.1-4(15), the applicability requirements of 327 IAC 2-6.1-1, and the Reportable Spills requirements of 327 IAC 2-6.1-5 (other than those meeting an exclusion under

327 IAC 2-6.1-3 or the criteria outlined below) are subject to the Reporting Responsibilities of 327 IAC 2-6.1-7.

It should be noted that the reporting requirements of 327 IAC 2-6.1 do not apply to those discharges or exceedences that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur. In order for a discharge or exceedence to be under the jurisdiction of this NPDES permit, the substance in question (a) must have been discharged in the normal course of operation from an outfall listed in this permit, and (b) must have been discharged from an outfall for which the permittee has authorization to discharge that substance.

Solids Disposal

The permittee is required to dispose of its sludge in accordance with 329 IAC 10, 327 IAC 6.1, or 40 CFR Part 503.

Receiving Stream

The facility proposes to discharge to White Lick Creek via Outfall 001. The receiving water has a seven day, ten year low flow ($Q_{7,10}$) of 0.0 cubic feet per second at the outfall location. The receiving stream is designated for full body contact recreational use and shall be capable of supporting a well-balanced warm water aquatic community in accordance with 327 IAC 2-1.

Industrial Contributions

There is no industrial flow to the wastewater treatment plant. This NPDES permit does not authorize the facility to accept industrial contributions until the permittee has provided the Indiana Department of Environmental Management with a characterization of the waste, including volume amounts, and this Office has determined whether effluent limitations are needed to ensure the State water quality standards are met in the receiving stream.

Antidegradation

327 IAC 2-1.3 outlines the state's Antidegradation Standards and Implementation Procedures. The Tier 1 antidegradation standard found in 327 IAC 2-1.3-3(a) applies to all surface waters of the state regardless of their existing water quality. Based on this standard, for all surface waters of the state, existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. IDEM implements the Tier 1 antidegradation standard by requiring NPDES permits to contain effluent limits and best management practices for regulated pollutants that ensure the narrative and numeric water quality criteria applicable to the designated use are achieved in the water and any designated use of the downstream water is maintained and protected.

The Tier 2 antidegradation standard found in 327 IAC 2-1.3-3(b) applies to surface waters of the state where the existing quality for a parameter is better than the water quality criterion for that parameter established in 327 IAC 2-1-6. These surface waters are considered high quality for the parameter and this high quality shall be maintained and protected unless the commissioner finds that allowing a significant lowering of water quality is necessary and accommodates important social or economic development in the area in which the waters are located. IDEM implements the Tier 2 antidegradation standard for regulated pollutants with numeric water quality criteria quality adopted in or developed pursuant to 327 IAC 2-1 and utilizes the antidegradation implementation procedures in 327 IAC 2-1.3-5 and 2-1.3-6.

According to 327 IAC 2-1.3-1(b), the antidegradation implementation procedures in 327 IAC 2-1.3-5 and 2-1.3-6 apply to a proposed new or increased loading of a regulated pollutant to surface waters of the state from a deliberate activity subject to the Clean Water Act, including a change in process or operation that will result in a significant lowering of water quality.

The NPDES permit establishes a new loading of ammonia-nitrogen that will result in a significant lowering of water quality as defined in 327 IAC 2-1.3-2(50). Therefore, the Antidegradation Implementation Procedures in 327 IAC 2-1.3-5 and 2-1.3-6 apply to the new loading of ammonia-nitrogen in the permitted discharge.

In accordance with 327 IAC 2-1.3-5, the Town of Whitestown submitted an antidegradation demonstration on January 18, 2013 for a new discharge of wastewater from the proposed Town of Whitestown South Wastewater Treatment Plant to White Lick Creek. IDEM reviewed the antidegradation demonstration and found it to be complete on April 10, 2013. The receipt of a complete antidegradation demonstration was public noticed on February 8, 2013, under public notice number 2013-2F-ADD, in the Lebanon Reporter of Boone County on February 8, 2013 and on the IDEM webpage for 30 days to solicit comments from the public. The public comment period ended on March 8, 2013. All comments received during the public comment period for the receipt of antidegradation demonstration were considered in making a tentative determination on the antidegradation demonstration and proposed NPDES discharge permit.

The commissioner of IDEM has made a tentative determination on the antidegradation demonstration to approve the proposed new discharge of wastewater from the proposed Town of Whitestown South Wastewater Treatment Plant into White Lick Creek. The following is a summary of the factors considered in making the tentative decision, which is in accordance with 327 IAC 2-1.3-6. The Town of Whitestown submitted an administratively complete antidegradation demonstration containing the required information in 327 IAC 2-1.3-5. The antidegradation demonstration provided an explanation of the necessity to accommodate additional wastewater flow which could not be treated with existing facilities. Information was also provided to support why this activity is necessary to support important social and economic development in the area. A range of alternatives was presented with associated costs and feasibility information. In total, five (5) alternatives were considered: 1) No Action; 2) New South WWTP; 3) Expansion of existing North WWTP; 4) Combination of Alternatives 1 & 2;

and 5) Pump to the City of Indianapolis for treatment. The preferred alternative (2) of construction of a new Whitestown South wastewater treatment facility is being approved. All other alternatives presented to prevent or minimize the proposed significant lowering of water quality were either technically infeasible; and/or were not cost-effective, and would pose an undue hardship upon Whitestown. Information also was provided indicating that the preferred alternative would not jeopardize endangered or threatened species. Therefore, the antidegradation demonstration may be approved in accordance with 327 IAC 2-1.3-6.

Effluent Limitations and Rationale

The effluent limitations proposed herein are based on Best Available Demonstrated Control Technology (BADCT) established in 327 IAC 2-1.3-5(e)(1), Indiana Water Quality Standards, and NPDES regulations. Monitoring frequencies are based upon facility size and type.

The final effluent limitations to be limited and/or monitored include: Flow, Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), Total Suspended Solids (TSS), Ammonia-nitrogen (NH_3-N), Phosphorus, pH, Dissolved Oxygen (DO), *Escherichia coli* (*E. coli)*, and Mercury.

Final Effluent Limitations

The summer monitoring period runs from May 1 through November 30 of each year and the winter monitoring period runs from December 1 through April 30 of each year. The disinfection season runs from April 1 through October 31 of each year.

The mass limits for $CBOD_5$, TSS, and ammonia-nitrogen are calculated by multiplying the average design flow (in MGD) by the corresponding concentration value and by 8.345.

Flow

Flow is to be measured five (5) times weekly as a 24-hour total. Reporting of flow is required by 327 IAC 5-2-13.

$CBOD_5$

$CBOD_5$ is limited to 10 mg/l (141.9 lbs/day) as a monthly average and 15 mg/l (212.8 lbs/day) as a weekly average.

Monitoring is to be conducted five (5) times weekly by 24-hour composite sampling. The $CBOD_5$ concentration limitations included in this permit are based on BADCT in accordance with 327 IAC 2-1.3-5(e)(1).

TSS

TSS is limited to 12 mg/l (170.2 lbs/day) as a monthly average and 18 mg/l (255.4 lbs/day) as a weekly average.

Monitoring is to be conducted five (5) times weekly by 24-hour composite sampling. The TSS concentration limitations included in this permit are based on BADCT in accordance with 327 IAC 2-1.3-5(e)(1).

Ammonia-nitrogen

Ammonia-nitrogen is limited to 1.1 mg/l (15.6 lbs/day) as a monthly average and 1.6 mg/l (22.7 lbs/day) as a weekly average during the summer monitoring period. During the winter monitoring period, ammonia-nitrogen is limited to 1.6 mg/l (22.7 lbs/day) as a monthly average and 2.4 mg/l (34.0 lbs/day) as a weekly average.

Monitoring is to be conducted five (5) times weekly by 24-hour composite sampling. The ammonia-nitrogen concentration limitations included in this permit are based on BADCT in accordance with 327 IAC 2-1.3-5(e)(1).

Phosphorus

Phosphorus is limited to 1.0 mg/l as a monthly average. Monitoring is to be conducted five (5) times weekly by 24-hour composite sampling. The phosphorus limitation included in this permit is based on BADCT in accordance with 327 IAC 2-1.3-5(e)(1).

pH

The pH limitations have been based on 40 CFR 133.102 which is cross-referenced in 327 IAC 5-5-3. To ensure conditions necessary for the maintenance of a well-balanced aquatic community, the pH of the final effluent must be between 6.0 and 9.0 standard units in accordance with provisions in 327 IAC 2-1-6(b)(2). pH must be measured five (5) times weekly by grab sampling.

Dissolved Oxygen

Dissolved oxygen shall not fall below 6.0 mg/l as a daily minimum average.

This dissolved oxygen limitation is based on BADCT in accordance with 327 IAC 2-1.3-5(e)(1). Dissolved oxygen measurements must be based on the average of four (4) grab samples taken within a 24-hr. period. This monitoring is to be conducted five (5) times weekly.

E. coli

The *E. coli* limitations and monitoring requirements apply from April 1 through October 31, annually. *E. coli* is limited to 125 count/100 ml as a monthly average, and 235 count/100 ml as a daily maximum. The monthly average *E. coli* value shall be calculated as a geometric mean.

This monitoring is to be conducted five (5) times weekly by grab sampling. These *E. coli* limitations are set in accordance with regulations specified in 327 IAC 5-10-6.

Mercury

The NPDES permit requires that mercury sampling be conducted bi-monthly (every other month) for the term of the permit (influent and effluent).

Backsliding

As this permit is for a proposed new facility, backsliding regulations do not apply.

Reopening Clauses

Four reopening clauses were incorporated into the permit in Part I.C. One clause is to incorporate effluent limits from any further wasteload allocations performed; a second clause is to allow for changes in the sludge disposal standards; a third clause is to incorporate any applicable effluent limitation or standard issued or approved under section 301(b)(2)(C), (D) and (E), 304(b)(2), and 307(a)(2) of the Clean Water Act; and a forth clause is to incorporate effluent limitations for mercury.

Compliance Status

As this is an NPDES permit for a new wastewater treatment facility, there is no compliance history.

Expiration Date

A five-year NPDES permit is proposed.

Drafted by: Alissa Pryor
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